

NEW PLANT RECORDS FOR THE FLORA OF LONG ISLAND, THE BAHAMAS

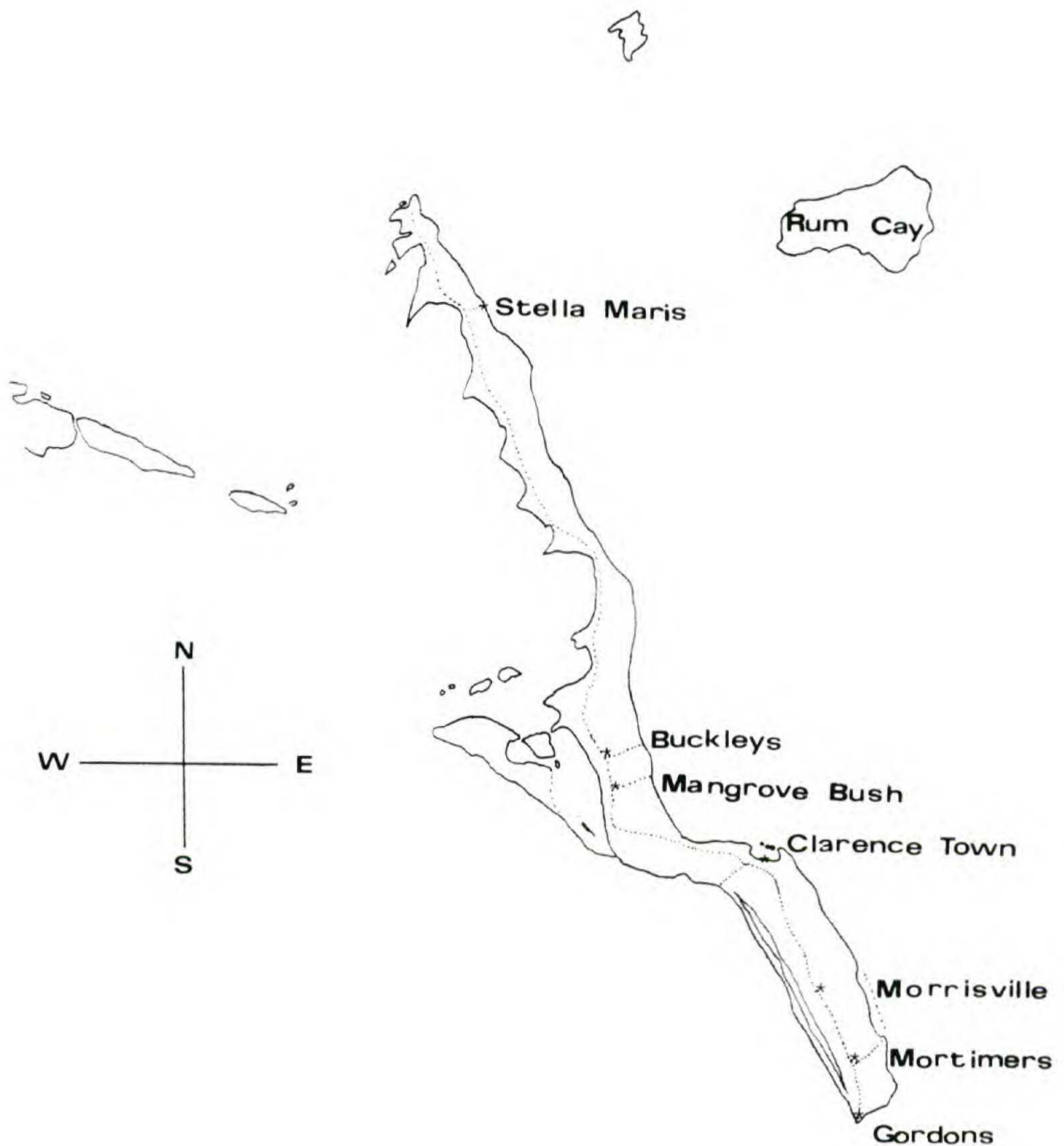
STEVEN R. HILL

Subsequent to a recent study of the plants of Long Island, The Bahamas, (Hill, 1974) the author traveled again to the island in June and July, 1974, with the intention of further collecting. This was a particularly good time to collect on the island since it coincided with the rainy season, and most taxa were either fruiting or flowering. There are two periods of rain on Long Island, each lasting about one month, the first being in June and the second in November. There is little rain during the other months of the year, according to those residents questioned. Collections of 355 numbers were obtained during this period, mostly in sets of three. The collections have been distributed as follows: one set each to the Fairchild Tropical Garden, New York Botanical Garden, and the University of Vermont (Pringle) Herbarium. A set of the Malvaceae was sent to Dr. Paul Fryxell at Texas A & M University, the grasses were sent to Dr. Gerrit Davidse at the Missouri Botanical Garden, and the sedges were referred to Dr. Tetsuo Koyama at the New York Botanical Garden. Unless otherwise stated, the determinations were by the author.

The large number of new records reflects the fact that there have been rather few botanists on the island, despite its large size (see Hill, 1974 for further details). This series of collections was made at various points on Long Island from the southernmost point (named 'Gordon's') to a short distance from the northernmost point at Stella Maris. General collecting was done, with special attention to plants not seen in other sections of the island. The records were then carefully checked with those in the *Bahama Flora* of Britton and Millspaugh (1920), and those not known previously from the island were included in this article. In addition, an apparent new species of *Euphorbia* was dis-

covered, and will be published separately. Species have been arranged according to the order of the *Bahama Flora*.

Several brief notes are included with each new record to localize the collection site and its habitat. The basic habitats are referred to as the following: whiteland, redland, blackland, coastal sand, or waste area. In all cases, the substrate is limestone, but the amount of accumulated humus present in a given area (and thus the amount of



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moisture which can be retained) varies. As might be expected, the blacklands have a significant layer of humus which retains some moisture. The redlands have less humus, and the whitelands are comparatively humus free. Sinkholes are common in areas where humus has accumulated, since the humic acid encourages solution of the limestone. The waste areas include pastures, roadsides, agricultural lands and other disturbed areas providing suitable habitats for escapes or introduced species.

Long Island has one primary road, called the Queen's Highway, which runs the length of the island. From this road several smaller roads cut across the island at various points in order to reach the coast. These have local names. The eastern coast of the island is usually referred to as the 'North Coast' by the residents, and likewise the western coast is called the 'South Coast'. The western coast is lined with an extensive barrier beach and is the leeward side of the island.

The author would like to gratefully acknowledge the help and encouragement of Dr. Donovan Correll and Dr. William T. Gillis. He would especially like to thank Father Philip Bevan, formerly of St. Paul's Church, Clarence Town, for his assistance during the collecting trip.

ANGIOSPERMS

TYPHACEAE: *Typha domingensis* (Pers.) Kunth.: Hill 2433. Local in wet sinks along Queen's Highway at Stella Maris.

POTAMOGETONACEAE: *Halodule beaudettei* (Den Hartog) Den Hartog: Hill 2418. Colonies at entrance to salina at the north end of Clarence Town Harbor. Det.: D. Correll.

GRAMINEAE: *Paspalum blodgettii* Chapm.: Hill 2187. Waste area on Harbor Point, Clarence Town. Det. G. Davidse.

Paspalum laxum Lam.: Hill 2200. Roadside near Health Clinic, salina margin, Clarence Town. Det.: G. Davidse.

Paspalum fimbriatum HBK.: Hill 2214. Roadside near the Post Office, Clarence Town.

Lasiacis divaricata (L.) Hitchc.: *Hill* 2289. Redlands, shaded, ca. 1 mile west of the Queen's Highway on the Galloway Road, South Clarence Town.

Setaria geniculata (Lam.) Beauv.: *Hill* 2359. Roadside near Post Office, Clarence Town. Det.: G. Davidse.

Cenchrus echinatus L.: *Hill* 2360. Roadside near Post Office, Clarence Town. Det.: G. Davidse.

Stenotaphrum secundatum (Walt.) Kuntze: *Hill* 2191. Coastal sand near town dock, Clarence Town.

Aristida ternipes Cav.: *Hill* 2273. Pastureland in redlands, 0.5 mile north of Clarence Town. Det.: G. Davidse.

Chloris barbata Sw.: *Hill* 2149. Edge of pastureland near the western edge of the town salina, Clarence Town. Det.: G. Davidse.

Diplachne fascicularis (Lam.) Beauv.: *Hill* 2339. Forming patches in a fresh water marsh, low area north of St. Paul's Church, Clarence Town.

Leptochloöpsis virgata (Poir.) Yates: *Hill* 2281. Coastal sand at Galloway's Landing.

CYPERACEAE: *Cyperus ligularis* L.: *Hill* 2371. In sinkhole of fresh water, 0.25 mile east of Galloway's Landing near the road.

Eleocharis cellulosa Torr.: *Hill* 2340. Fresh water marsh, low area north of St. Paul's Church, Clarence Town.

Eleocharis caribaea (Rottb.) Blake: *Hill* 2315. Fresh water marsh, low area at Queen's Highway survey marker #BM 43, 1972, 2 miles south of Clarence Town. *Hill* 2341. Fresh water marsh, low area north of St. Paul's Church, Clarence Town. Both det.: D. Correll.

Fimbristylis castanea (Michx.) Vahl: *Hill* 2284. Waste area under coconut trees, Galloway's Landing. *Hill* 2314. Moist soil along Queen's Highway at survey marker #BM 43, 1972, 2 miles south of Clarence Town. Both det.: T. Koyama.

Fimbristylis cymosa R.Br. ssp. *spathacea* (Roth.) T. Koyama: *Hill* 2268. Crevices on rocky limestone barrens, vicinity of Holy Family Church, Mortimers. Det.: T. Koyama.

Fimbristylis ovata (Burm.) Kern.: *Hill* 2304. Rocky barrens east of the island ridge, 1 mile south of Clarence Town directly west of the Blue Hole in the Harbor. Det.: T. Koyama.

Scirpus robustus Pursh: *Hill* 2280. Large colony at the west end of the salina lying 1 mile west of St. Paul's Church, Clarence Town. Det.: T. Koyama.

Rynchospora cyperoides (Sw.) Mart.: *Hill* 2422. Blacklands among sabal palms, 0.5 mile south of Clarence Town, east of the road. Det.: D. Correll.

PALMAE: *Pseudophoenix sargentii* Wendl.: *Hill* 2398. Scattered on the low barrier ridge between 2-6 miles south of Galloway's Landing.

BROMELIACEAE: *Tillandsia balbisiana* Schultes: *Hill* 2305. Redlands west of the Queen's Highway at survey marker #BM 43, 1972, 2 miles south of Clarence Town.

Tillandsia circinata Schl.: *Hill* 2375. Blacklands 0.25 mile east of Galloway's Landing.

Tillandsia flexuosa Lindl.: *Hill* 2306. Redlands west of the Queen's Highway at survey marker #BM 43, 1972, 2 miles south of Clarence Town.

AMARYLLIDACEAE: *Agave indigatorum* Trel.: *Hill* 2347. Occasional in whitelands, vicinity of Morrisville School, Morrisville. Det.: H. S. Gentry.

Zephyranthes tubispatha (L'Herit.) Herbert: *Hill* 2262. Escaped and established in vicinity of St. Paul's Church, Clarence Town.

ORCHIDACEAE: *Spiranthes tortilis* (Sw.) L. C. Rich: *Hill* 2317. Sandy soil around marsh, east of Queen's Highway at survey marker #BM 43, 1972, 2 miles south of Clarence Town.

Broughtonia lindenii (Lindl.) Dressler: *Hill* 2426. Whitelands, rocky, along the trail to the south light, at Gordons.

Epidendrum altissima Schltr.: *Hill* 2366. Low epiphyte in shaded mangrove swamp, Galloway's Landing.

CASUARINACEAE: *Casuarina equisetifolia* Forst.: Hill 2369. Escaped and well established at Galloway's Landing.

ULMACEAE: *Trema lamarckianum* (R. & S.) Blume: Hill 2378. Whitelands just east of Buckley's School, Deadman's Cay. Hill 2442. Common on coastal ridge at Stella Maris.

MORACEAE: *Ficus aurea* Nutt.: Hill 2404. Locally common, rock barrens near beginning of the Mangrove Bush Road to the coast.

POLYGONACEAE: *Coccoloba krugii* Lindau: Hill 2344. Whitelands, vicinity of Morrisville School, Morrisville. Det.: D. Correll.

AMARANTHACEAE: *Amaranthus dubius* Mart. ex Thell.: Hill 2208. Waste area near St. Paul's Church, Clarence Town.

NYCTAGINACEAE: *Boerhavia coccinea* Mill.: Hill 2361. Waste area near Post Office, Clarence Town.

Guapira obtusata (Jacq.) Little: Hill 2379. Whitelands 0.5 mile east of Buckley's School, Deadman's Cay, on the road to the coast. Det.: D. Correll.

ANNONACEAE: *Annona squamosa* L.: Hill 2293. Escaped and established on hillsides in South Clarence Town.

CHRYSOBALANACEAE: *Chrysobalanus icaco* L.: Hill 2421. Bordering fresh water spring, 0.5 mile south of Clarence Town, west side of Queen's Highway.

MIMOSACEAE: *Pithecolobium mucronatum* Britt.: Hill 2234. Whitelands area near the westernmost town salina, 1 mile southwest of St. Paul's Church. Det.: D. Correll. This is not a new record, but it is a significant find, being the second collection of a species endemic to Clarence Town. This is a topotype.

Pithecolobium bahamensis Northrop: Hill 2230. Whitelands at north side of the southernmost town salina, Clarence Town.

Calliandra haematomma (Bert.) Benth.: Hill 2389. Very local in rocky field along road, Lower Deadman's Cay.

Neptunia plena (L.) Benth.: Hill 2286. In dunes, 100 meters east of the surf, Galloway's Landing.

CAESALPINIACEAE: *Tamarindus indica* L.: Hill 2146. Common escape. Western end of the northern town salina, Clarence Town.

Cassia sophera L.: Hill 2343. Roadside, vicinity of Morrisville School, Morrisville.

Caesalpinia reticulata Britton: Hill 2425. Whitelands, rocky, along the trail to the south light, at Gordons.

FABACEAE: *Ateleia gummifera* (Bert. ex DC.) Dietr.: Hill 2129. Rocky barrens, across the Queen's Highway from Holy Family Church, Mortimers. Det.: D. Correll.

Crotalaria retusa L.: Hill 2330. Coastal sands behind ridge, southern extension of the Turtle Cove Road, ca. 5 miles north of Clarence Town.

Crotalaria incana L.: Hill 2227. Waste area, 0.24 mile east of St. Paul's Church, Clarence Town.

Piscidia piscipula (L.) Sarg.: Hill 2443. On coastal ridge, Stella Maris. Not seen to grow south of Deadman's Cay.

Abrus precatorius L.: Hill 2296. Rocky hillsides near the plantation ruins, South Clarence Town.

Galactia bahamensis Urb.: Hill 2386. Coastal rock and sand, end of Buckleys Road, Deadman's Cay.

Rhynchosia minima (L.) DC.: Hill 2204. Coastal whitelands, near Harbor Point, Clarence Town.

MALPIGHIACEAE: *Triopteris jamaicensis* L.: Hill 2203. Whitelands near Harbor Point, Clarence Town.

Byrsonima lucida (Mill.) DC.: Hill 2395. Along coastal ridge, whitelands, 5 miles south of Galloway's Landing along the Diamond Crystal Salt Road.

Bunchosia glandulosa (Cav.) DC.: Hill 2249. Redlands, west side of the southwest town salina, Clarence Town.

EUPHORBIACEAE: *Euphorbia cyathophora* Murr.: Hill 2241. Roadsides, 0.5 mile west of St. Paul's Church, Clarence Town.

Euphorbia lecheoides Millsp.: Hill 2370. Coastal rock and sand, Galloway's Landing. This may be a new variety. Det.: D. Correll.

RHAMNACEAE: *Ziziphus taylori* (Britt.) M. C. Johnston: *Hill* 2427. Rocky land on trail to the south light, Gordons.

VITACEAE: *Cissus intermedia* A. Rich.: *Hill* 2377. On rock walls and shrubs along the Queen's Highway, Buckleys, Deadman's Cay.

MALVACEAE: *Sida ciliaris* L. var. *involuta* (A. Rich.) Clem.: *Hill* 2261. Roadside, south side of the western town salina, 1 mile southwest of St. Paul's Church, Clarence Town. Det.: P. Fryxell.

Hibiscus brittonianus Kearney: *Hill* 2309. Redlands, 1 mile west of the Queen's Highway at survey marker #BM 43, 1972, ca. 2 miles south of Clarence Town. Det.: P. Fryxell.

Hibiscus tiliaceus L.: *Hill* 2444. Possibly an escape. Near Long Island Hardware Ltd. store, Deadman's Cay.

STERCULIACEAE: *Helicteres semitriloba* Bertero: *Hill* 2310. Redlands, 1 mile west of the Queen's Highway at survey marker #BM 43, 1972, ca. 2 miles south of Clarence Town.

Melochia pyramidata L.: *Hill* 2180. Waste areas around St. Paul's Church, Clarence Town.

Waltheria indica L.: *Hill* 2120. Waste areas 0.5 mile east of St. Paul's Church, Clarence Town.

CLUSIACEAE: *Clusia rosea* Jacq.: *Hill* 2403. Rocky barrens near beginning of the Mangrove Bush Road to the coast.

FLACOURTIACEAE: *Banara reticulata* Griseb.: *Hill* 2229. Whitelands at the north side of the southernmost town salina at Clarence Town. Det.: D. Correll.

PASSIFLORACEAE: *Passiflora cupraea* L.: *Hill* 2368. Coastal rock and sand behind ridge, Galloway's Landing.

CACTACEAE: *Harrisia brookii* Britton: *Hill* 2291. Rocky hills in South Clarence Town; fruiting specimens. This, again, is not a new record, but represents the second collection of a species endemic to the vicinity of Clarence Town. This is a topotype.

COMBRETACEAE: *Laguncularia racemosa* (L.) Gaertn.: *Hill* 2285. Mangrove area, 100 meters east of Galloway's Landing.

EBENACEAE: *Diospyros caribaea* (A.DC.) Standley: *Hill* 2384. Coastal ridge facing the ocean, end of Buckleys Road, Deadman's Cay.

LOGANIACEAE: *Spigelia anthelmia* L.: *Hill* 2388. Old field in redlands, Lower Deadman's Cay.

GENTIANACEAE: *Sabatia stellaris* Pursh: *Hill* 2396. Sandy roadside along coastal ridge, 5 miles south of Galloway's Landing on the Diamond Crystal Salt Road. Det.: D. Correll.

ASCLEPIADACEAE: *Cynanchum northropiae* (Schltr.) Alain: *Hill* 2406. Whitelands near Kentucky Springs Club, vicinity of Turtle Cove Road ca. 5 miles north of Clarence Town.

BORAGINACEAE: *Heliotropium nanum* Northrop: *Hill* 2355. Vicinity of Morrisville School in whitelands, Morrisville. *Hill* 2380. Coastal slopes in sand, end of Buckleys Road, Deadman's Cay. *Hill* 2430. Sandy area above salina margin, near beginning of trail to south light, Gordons. Det.: D. Correll.

Tournefortia poliochros Spreng.: *Hill* 2154. Scrubland at upper margin of the northern salina between Harbour Store and the Post Office, Clarence Town.

VERBENACEAE: *Bouchea prismatica* (L.) Kuntze: *Hill* 2213. Waste area near St. Paul's Church, Clarence Town. Det.: H. N. Moldenke.

Priva lappulacea (L.) Pers.: *Hill* 2150. Upper edges of the north salina at pasture edge. Clarence Town.

Phyla nodiflora (L.) Greene: *Hill* 2137. Moist sand near well by public beach, across from Health Clinic, Clarence Town.

LABIATAE: *Leonotis nepetaefolia* (L.) R. Br.: *Hill* 2209. Waste places near St. Paul's Church, Clarence Town.

SOLANACEAE: *Physalis angulata* L.: Hill 2210. Waste area near St. Paul's Church, Clarence Town.

BIGNONIACEAE: *Jacaranda caerulea* (L.) Griseb.: Hill 2405. Rock crevices at beginning of Mangrove Bush Road.

RUBIACEAE: *Catesbaea parviflora* Sw.: Hill 2399. In coastal sand, 1 mile south of Galloway's Landing.

Morinda citrifolia L.: Hill 2335. Roadside, 2.5 miles north of Clarence Town.

ASTERACEAE: *Iva imbricata* Walt.: Hill 2431. Coastal dunes, western beach, Gordons Landing. Det.: B. L. Turner.

Vernonia cinerea (L.) Less: Hill 2350. In cornfields, vicinity of Morrisville School, Morrisville. Det.: B. L. Turner.

Eupatorium lucayanum Britt.: Hill 2329. Rocky coastal bluff, Turtle Cove, near abandoned guesthouse, 5 miles north of Clarence Town. Det.: B. L. Turner.

Conyza canadensis L. var. *pusilla* (Nutt.) Cronquist: Hill 2179. Roadside near St. Paul's Rectory, Clarence Town.

Melanthera nivea (L.) Small: Hill 2148. Upper edge of northern salina, edge of pasture, Clarence Town. Det.: D. Correll.

Tridax procumbens L.: Hill 2115. Roadside, 0.5 mile east of St. Paul's Church, Clarence Town. Det.: D. Correll.

Flaveria trinervia (Spreng.) C. Mohr.: Hill 2351. Moist sinkhole, vicinity of the Morrisville School, Morrisville. Det.: B. L. Turner.

Emilia javanica (Burm.) C. B. Robins.: Hill 2352. Moist sinkhole, vicinity of Morrisville School, Morrisville. Det.: B. L. Turner.

GYMNOSPERMS

CYCADACEAE: *Zamia lucayana* Britton. This species is included in order to give further information on its range. The previous paper on the Flora of Long Island (Hill, 1974) noted its rediscovery at Turtle Cove. This author

again attempted to find other colonies of this interesting plant, and did so in three sites. *Hill* 2334 was from Turtle Cove (5 miles north of Clarence Town). *Hill* 2381 was from the Bluffs at the end of Buckleys Road, Deadman's Cay. *Hill* 2409 was from the dunes at the end of the Mangrove Bush Road. These collections along with reports from local residents suggest that the plant is found sparsely but continuously from a point just north of Clarence Town, at least to the north side of Deadman's Cay, about 15 miles to the north.

FERNS

POLYPODIACEAE: *Adiantum tenerum* Sw.: *Hill* 2288. Sinkhole, along Galloway Road 1.5 miles west of the Queen's Highway.

Thelypteris reptans (Gmel.) Morton: *Hill* 2353. Sinkhole, vicinity of Morrisville School, Morrisville.

Nephrolepis exaltata (L.) Schott: *Hill* 2373. Sinkhole, 0.25 mile east of Galloway's Landing.

SCHIZEACEAE: *Anemia adiantifolia* (L.) Sw.: *Hill* 2316. Walls of depression, east side of road near survey marker #BM 43, 1972. 2 miles south of Clarence Town. Seen also at Deadman's Cay.

ALGAE

CHLOROPHYCOPHYTA: *Udotea cyathiformis* Decaisne: *Hill* 2327. Clarence Town Harbor

Penicillus capitatus Lamarck: *Hill* 2326. Clarence Town Harbor.

Rhipocephalus phoenix (Ell. & Soland.) Kütz.: *Hill* 2325. Clarence Town Harbor.

Udotea flabellum (Ell. & Soland.) M. A. Howe: *Hill* 2324. Clarence Town Harbor.

Caulerpa cupressoides (West.) Ag.: *Hill* 2323. Clarence Town Harbor.

Avrainvillea nigricans Decaisne: *Hill* 2322. Clarence Town Harbor.

Acetabularia crenulata Lamour.: Hill 2414. Clarence Town Harbor.

Halimeda opuntia (L.) Lamour.: Hill 2415. Clarence Town Harbor.

Cymopolia barbata (L.) Lamour.: Hill 2419. Clarence Town Harbor.

PHAEOPHYCOPHYTA: *Turbinaria turbinata* (L.) Kuntze: Hill 2321. Clarence Town Harbor.

FUNGI

EUMYCOPHYTA: *Cladobotryum verticillatum* (Link ex S. F. Gray) S. J. Hughes: Hill 2319b. Parasite on *Russula*. Whitelands in humus pocket, 1 mile south of Clarence Town. Det.: C. Rogerson.

Sapedonium chrysospermum (Bulliard) Link ex Fries: Hill 2319a. Parasite on a bolete. Whitelands in humus pocket, 1 mile south of Clarence Town. Det.: C. Rogerson.

Scleroderma stellatum Berk.: Hill 2319d. In coastal sand near high tide mark. Galloway's Landing. Det.: C. Rogerson.

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